

Special Session XII

Special Session Basic Information:

专栏题目 Session Title	中文：极端事件下新型电力系统的韧性提升技术 英文：Resilience Enhancement Technology for New Power Systems Under Extreme Events
专栏介绍和征稿主题 Introduction and topics	
<p>中文：随着全球气候变暖趋势持续加剧，极端灾害事件对世界构成的威胁日益严峻。尤其在新型电力系统架构下，可再生能源发电比例的增加提升了系统的内在脆弱性。同时，新型电力系统正逐步演变为高度互联的信息物理融合系统，其运行极大依赖于通信网络。信息化水平的提升虽增强了系统的实时感知与动态调控能力，但也显著增加了遭受恶意网络攻击的暴露风险。在极端事件影响下，新型电力系统的安全稳定运行面临严重挑战。因此，研究提升新型电力系统韧性的相关技术至关重要，这对保障极端情况下的电力持续供应具有关键意义。</p> <p>英文：With global warming trend continuing, the world is facing increasing the risk of extreme disaster events. Especially in the context of new power system, the increase in the share of renewable energy generation augments the vulnerability of the system. Moreover, new power systems transforms into highly interconnected cyber-physical systems that are greatly dependent on communication networks. The increase in informatization not only enhances the system's capabilities for real-time perception and dynamic control but also intensifies the risk of exposure to malicious cyberattacks. The safe and stable operation of the new power system is significantly threatened under extreme events. Therefore, it is essential to investigate technologies for enhancing the resilience of the new power system, as they are crucial for ensuring the continuous supply of electricity during extreme conditions.</p>	

Special Session Chair(s):

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Organizer's Brief Biography

中文：王玉翠，博士，华北电力大学（保定）电力工程系讲师，主持河北省自然科学基金青年项目 1 项、河北省高等学校科学研究青年项目 1 项，中央高校面上项目 1 项，以主研人参与国家自然科学基金重点项目 1 项、国家电网公司总部科技项目 3 项。主要从事综合能源韧性/可靠性优化、虚拟电厂等方面的研究、近三年以第一作者或通信作者发表 SCI 论文 10 余篇，授权专利 2 项。

英文：Yucui Wang, Ph.D., is a Lecturer in the Department of Electrical Engineering at North China Electric Power University (Baoding). She serves as the Principal Investigator (PI) for one Youth Program of the Natural Science Foundation of Hebei Province, one Youth Scientific Research Project of Higher Education Institutions of Hebei Province,

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Organizer's Brief Biography

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英文：Wang Chutong, a lecturer at the School of Electric Power, North China Electric Power University, holds a Ph.D. in Electrical Engineering from Zhejiang University. His research focuses on energy storage in power systems, power markets, integrated energy system optimization, virtual power plants, and frequency stability. He has led/participated in 2 National Natural Science Foundation projects, over 10 State/South Grid Corporation projects, and 1 provincial project. With 30+ SCI/EI/Chinese core papers and 2 authorized patents.

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中文：

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